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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,376	04/17/2002	Carl J. Radens	BUR920010105	5971
30607	7590	03/11/2004	EXAMINER	
SCHMEISER, OLSEN & WATTS LLP 18 EAST UNIVERSITY DRIVE, #101 MESA, AZ 85201			LOKE, STEVEN HO YIN	
		ART UNIT	PAPER NUMBER	
		2811		

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/063,376	RADENS ET AL.
	Examiner Steven Loke	Art Unit 2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 July 2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-11 and 15-23 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 11 and 15 is/are rejected.  
 7) Claim(s) 1-10 and 16-23 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                     | Paper No(s)/Mail Date. _____ .  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

1. Claims 1-11, 17 and 19 are objected to because of the following informalities:  
Claim 1, line 9, the phrase "the insulator layer" has no antecedent basis. Claim 3, line 3, claim 17, line 3, claim 19, line 2, the phrase "the edge perimeter" has no antecedent basis. Appropriate correction is required.
2. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification never discloses the second width of the second finger is unequal to the first width of the first finger as claimed in claim 11.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 15 is rejected under 35 U.S.C. 102(e) as being anticipated by Bertin et al

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

Art Unit: 2811

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

In regards to claim 15, Bertin et al. inherently disclose a method for increasing statistical programming of an antifuse (col. 7, line 54 to col. 8, line 1), comprising: inherently forming a first conductor [220a] and a second conductor [204] separated by a dielectric layer (a dielectric layer similar to [216] of fig. 2A), wherein the first conductor [220a] (a conductor similar to [220] of fig. 2 but having a plurality of fingers) is positioned above the second conductor [204], wherein the first conductor [220a] has an intersection perimeter that comprises edge portions of the first conductor [220a] wherein the edge portions of the first conductor are positioned directly above the second conductor [204], wherein a minimum voltage between the first and second conductors is required to create a current path between the first and second conductors through the dielectric layer (col. 7, lines 39-53); and increasing the length of the intersection perimeter (the intersection perimeters at the high field merge locations [218a-p] of fig. 2B).

5. Applicant's arguments filed 7/10/03 have been fully considered but they are not persuasive.

It is urged, in pages 12-13 of the remarks, that since the substantial equality of the finger 22 widths is limited to "one embodiment", it is logically or inherently follows that the substantial equality of the finger 22 widths is not a general characteristic of all embodiments of the present invention. However, neither the written specification nor the figures of the other embodiments shows the second width of the second finger is

Art Unit: 2811

unequal to the first width of the first finger. In addition, figs. 5 and 5A show a width of each of the fingers [26] of the first conductor is equal to a width of each of the fingers [22] of the second conductor. The applicants cannot assume that it is logically or inherently follows that the substantial equality of the finger 22 widths is not a general characteristic of all embodiments of the present invention. Therefore, the examiner believed that the specification does not support the claimed subject matters as claimed in claim 11.

It is urge, in page 14 of the remarks, that Bertin et al. is now disqualified as prior art against the claimed invention if that subject matter and the claimed invention "were, at the time the invention was made, owned by the same person or subject to assignment by the same". The examiner agreed with the applicants and the prior art rejection under 35 U.S.C. 103 via 35 U.S.C. 102(e) is now withdrawn. However, claim 15 is still rejected under 35 U.S.C. 102(e) because of the earlier effective U.S. filing date of the reference.

6. Claims 1 would be allowable if rewritten or amended to overcome the objection set forth in this Office action.

7. Claims 16 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: The first additional major difference in the claims not found in the prior art of record is the step of increasing an intersection perimeter of the antifuse comprises the

Art Unit: 2811

step of forming a plurality of fingers in at least one of the conductors by patterning and etching. The second additional major difference in the claims not found in the prior art of record is the step of applying a programming voltage not less than the minimum voltage to create the current path between the first and second conductors through the dielectric layer, wherein the current path created by a voltage that is not less than a minimum voltage would traverse the insulator layer essentially at the intersection perimeter rather than elsewhere.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Loke whose telephone number is (571) 272-1657. The examiner can normally be reached on 7:50 am to 5:20 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (571) 272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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March 10, 2004

Eddie Lee  
Primary Examiner

